

English

Life Expectancy and Mortality in Vienna and Austria

An International Comparison

gfg Bereichsleitung für Gesundheitsplanung und Finanzmanagement

Stadt Wien

Table of Contents

Introduction 3

Age Structure 4
Vienna´s Position among European Cities 4
Austria´s Position among European Countries 6

Life Expectancy 8
Vienna´s Position among European Cities 9
Austria´s Position among European Countries 10
Healthy Life Expectancy 18

Mortality 22
Infant Mortality 22
Vienna´s Position among European Cities 23
Austria´s Position among European Countries 24
Overall Mortality 26
Vienna´s Position among European Cities 27
Austria´s Position among European Countries 28

Causes of Death 33
Austria´s Position among European Countries 33

Avoidable Mortality and Lost Life Years 36
Austria´s Position among European Countries 37

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Introduction

Austria has been a member of the European Union since 1 January 1995. With just over 8 million inhabitants and a total area of 84,000 sq km, it has a population density of 96 persons per sq km. 21 percent of the population are aged 60 years or over, while 17.5 percent are under 15 years old.

Vienna (1.55 million inhabitants) is not only the federal capital, but also one of the nine federal provinces (Länder). Therefore, Vienna has its own public health care administration.

The Austrian public health care system is characterised by the interaction of public, private nonprofit, and private entities. The compulsory, income-dependent health and social insurance is based on the principle of solidarity (paid for half by the employees, half by the employers; coverage extends to dependants as well as to unemployed and retired persons) and covers 99 percent of the population. Free choice of medical practitioner and largely free choice of hospital, as well as a lack of waiting lists, are other features of the Austrian health care system.

Just as other Western European countries, Austria is facing the phenomenon of a marked increase in life expectancy – which is likely to continue – and decreasing mortality, especially among the older age groups. Together with the ageing of the post-war baby boom generation, this results in a considerable change in the demographic structure, as well as in a serious structural change in morbidity, as many of the most frequent diseases today are age-related.

This report is designed as a detailed summary of the more extensive report on "Life Expectancy and Mortality in Vienna", placing particular emphasis on international benchmarking. To date, there are hardly any statistical comparisons of health data at the regional level. A large part of the statistical data on cities presented in this brochure was therefore collected directly in the individual countries, as were the updates on national data from international statistical comparisons (OECD, WHO). This publication is a contribution of the Vienna health reporting system to the regional comparison of public health data at the European level, which is of growing interest to all those concerned.

International reference values and the individual statistical data provide relevant additional information on the position of the own country or city within Europe. This provides inspiration and motivation for improving the national public health care policy and visualises past successes. The increasing globalisation and opening up of Europe entail new challenges and opportunities in the area of public health for all European governments. Common needs and the comparison of health statistics can therefore become a driving force for identifying common priorities in public health care policy.

Vienna has been a part of various European city networks for many years, such as the WHO Healthy Cities network since 1989, and the EU Megapoles network since 1997. Vienna will also participate actively in a number of planned EU projects on regional health reporting in Europe.

Age Structure

Population

The results of the last population census show that as of the reference date 15 May 2001, Austria had a total of 8.032.926 inhabitants. 1.550.123 persons had their main residence in Vienna. 16 percent of Vienna´s resident population are foreign citizens; their share is especially significant among the young population.

Female Share

51.6 percent of the Austrian and 52.8 percent of the Viennese population are women. In the age group 60 and over, however, the share of women is 59 percent for Austria and 62 percent for Vienna. In the age group 75 and over, the share of women is even higher: more than 69 percent for Austria, and more than 71 percent for Vienna.

Age Structure

21 percent of the Austrian population are 60 years old or over, some 7 percent are aged 75 or over, and just under 17 percent are children, i.e. under 15 years old.

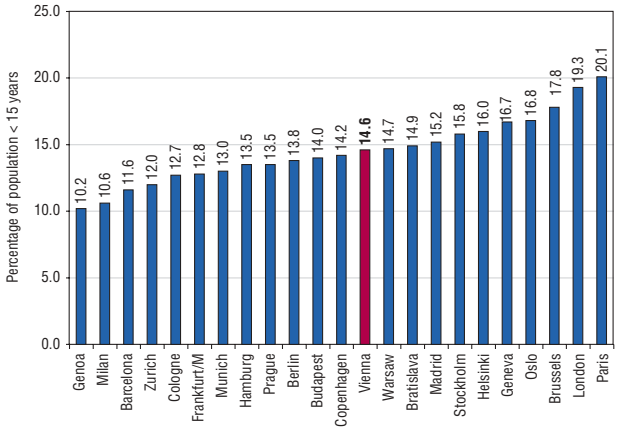
In Vienna, just under 22 percent of the resident population are aged 60 or over, placing Vienna near the Austrian average. 58 percent are under 45 years old. The share of children (under 15 years old) of only 15 percent, however, places Vienna at the bottom of the national table together with Burgenland.

Vienna´s Position among European Cities

An inter-city comparison of European cities places Vienna, with its **share of children** of approx. 15 percent, near the European average, together with Copenhagen, Budapest, Warsaw and Bratislava. Paris and London have the highest shares of children – both cities also have a high share of young immigrant families. The Italian industrial cities Genoa and Milan have the lowest percentage of children, and Barcelona and Zurich also have significantly lower values than other European cities *(cf. fig. 1)*.

With a **proportion of elderly people** of approximately 21 percent, Vienna ranks relatively high, together with Warsaw and Budapest. Genoa, Milan and Barcelona have the highest proportions of elderly people, while Paris has the lowest share by far. Madrid, Copenhagen, London and Bratislava are below average, as well *(cf. fig. 2)*.

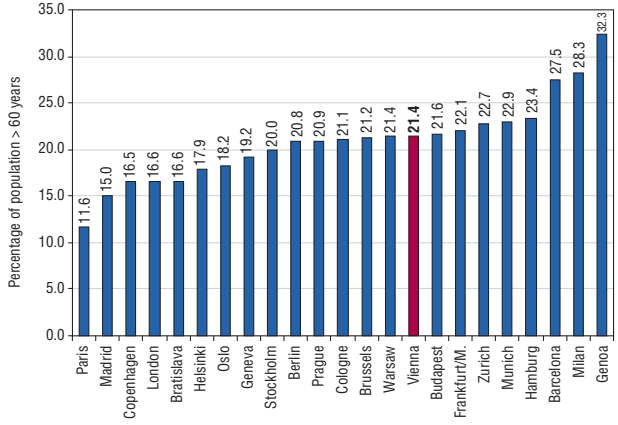
Fig. 1: Proportion of the population aged under 15. Vienna compared to other European cities [1)]



1) Cities with available data only. Data for 1999 or 2000.

Source: City of Vienna Pocket Statistics, edition 2002.

Fig. 2: Proportion of the population aged over 60. Vienna compared to other European cities[1)]



1) Cities with available data only. Data for 1999 or 2000.

Source: City of Vienna Pocket Statistics, edition 2002.

Austria´s Position among European Countries

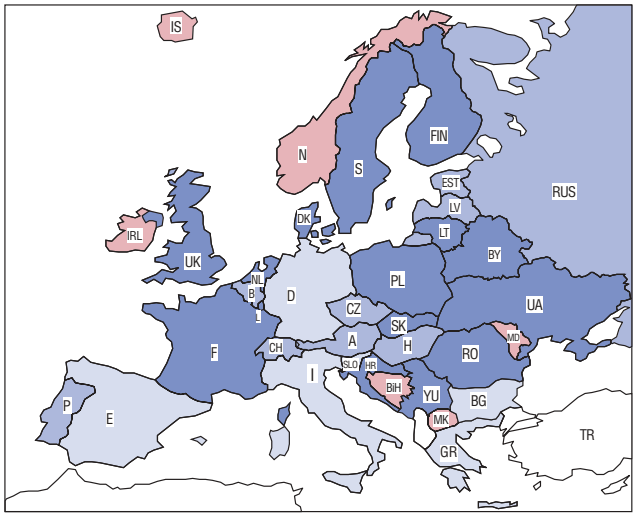
Compared to the other European countries, Austria ranks low regarding the proportion of children (not quite 17 percent), while the proportion of persons aged 60 or over (21 percent) is among the highest in Europe. The following two maps of Europe illustrate the ranking of the individual European countries.

Table 1: Europe: Proportion of children and elderly people as percent of total population

Country	Percentage of total population	
	under 15 years	65 years an over
Austria	*16.6*	*21.0*
Belarus	*18.3*	*19.1*
Belgium	*17.6*	*21.9*
Bosnia and Herzegovina	*23.6*	*11.1*
Bulgaria	*15.5*	*21.8*
Croatia	*19.8*	*18.6*
Czech Republic	*16.2*	*18.5*
Denmark	*18.6*	*19.8*
Estonia	*17.7*	*21.2*
Finland	*18.1*	*20.0*
France	*18.8*	*20.6*
FYR of Macedonia	*22.0*	*14.5*
Germany	*15.5*	*23.6*
Greece	*15.2*	*23.1*
Hungary	*17.1*	*19.7*
Iceland	*23.2*	*15.0*
Ireland	*21.5*	*15.0*
Italy	*14.4*	*24.3*
Latvia	*17.3*	*21.5*
Lithuania	*19.1*	*18.8*
Luxembourg	*19.0*	*19.1*
Malta	*19,9*	*16,9*
Moldova	*23.8*	*13.6*
Netherlands	*18.6*	*18.2*
Norway	*20.0*	*19.3*
Poland	*18.8*	*16.7*
Portugal	*16.6*	*20.7*
Romania	*18.0*	*18.9*
Russian Federation	*17.6*	*18.7*
Slovakia	*19.2*	*15.5*
Slovenia	*15.7*	*19.3*
Spain	*14.7*	*21.6*
Sweden	*18.4*	*22.2*
Switzerland	*17.3*	*20.3*
Ukraine	*18.5*	*20.1*
United Kingdom	*18.9*	*20.4*
Yugoslavia	*19.8*	*19.0*

Source: Statistics Austria – Statistical Yearbook 2003, pp. 502 (UN, Council of Europe, EUROSTAT, national statistical publications).

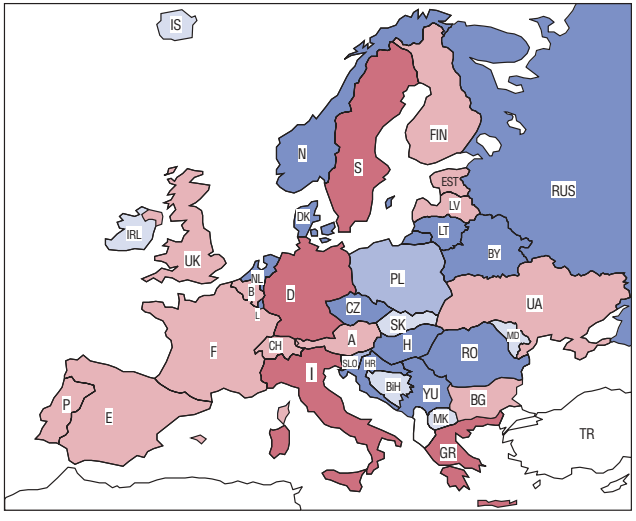
Fig. 3: Europe: Proportion of the population aged under 15



Countries	Proportion of children
Moldova, Bosnia and Herzegovina, Iceland, FYR of Macedonia, Ireland, Norway	20 % and over
Yugoslavia, Croatia, Slovakia, Lithuania, Luxembourg, France, United Kingdom, Poland, Denmark, Netherlands, Ukraine, Sweden, Belarus, Finland, Romania	18.0–19.9 %
Estonia, Belgium, Russian Federation, Latvia, Switzerland, Hungary, Austria, Portugal, Czech Republic	16.0–17.9 %
Slovenia, Bulgaria, Germany, Greece, Spain, Italy	less than 16 %

Source: Statistics Austria – Statistical Yearbook 2003.

Fig. 4: Europe: Proportion of the population aged 60 or over



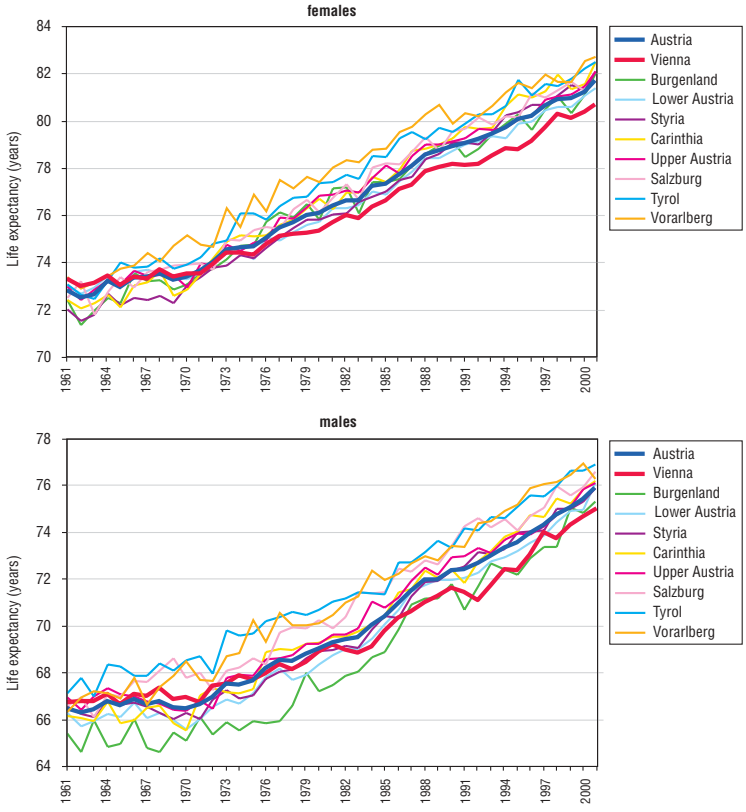
Countries	Proportion of elderly people
Italy, Germany, Greece, Sweden	22 % and over
Belgium, Bulgaria, Spain, Latvia, Estonia, Austria, Portugal, France, United Kingdom, Switzerland, Ukraine, Finland	20.0–21.9 %
Denmark, Hungary, Norway, Slovenia, Luxembourg, Belarus, Yugoslavia, Romania, Lithuania, Russian Federation, Croatia, Czech Republic, Netherlands	18.0–19.9 %
Poland	16.0–17.9 %
Slovakia, Ireland, Iceland, FYR of Macedonia, Moldova, Bosnia and Herzegovina	less than 16.0%

Source: Statistics Austria – Statistical Yearbook 2003.

Life Expectancy

The development of life expectancy in the individual federal states differs greatly. Until 1964, Vienna had the highest female life expectancy along with Vorarlberg, and male life expectancy was above the national average until 1975 and approximately equalled it until 1981. Since 1978, however, Vienna ranks lowest regarding female life expectancy, and life expectancy for men dropped markedly below Austrian average in the early 1980s.

Fig. 5: Life expectancy at birth by federal provinces, 1961–2001 (different scaling)



Source: Statistics Austria – Health Statistics Yearbook 2000.

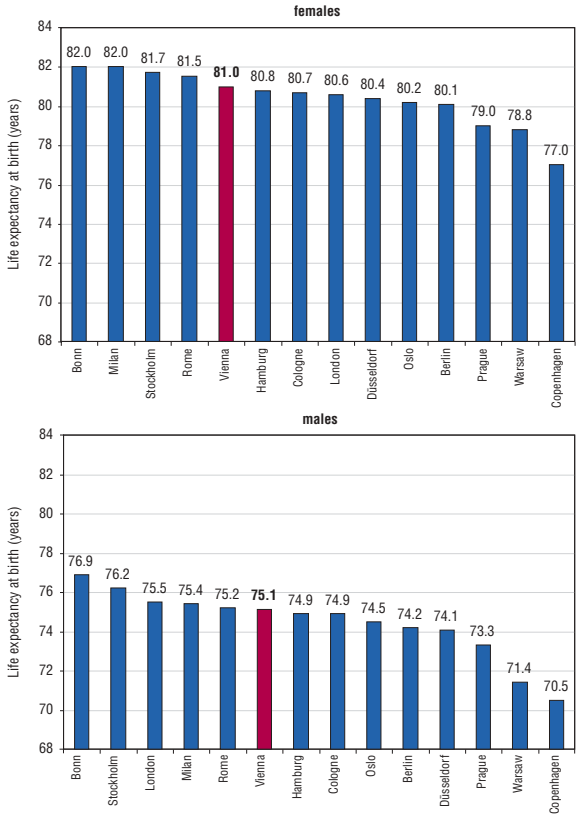
West-East Gap

Eastern Austria (federal provinces of Vienna, Lower Austria and Burgenland) presents the lowest values for life expectancy – especially male –, while the western and southern parts of the country are roughly equal. For women, the differences are less marked.

Vienna´s Position among European Cities

There is currently no statistical comparison of European cities concerning life expectancy available. A comparison of life expectancies for individual cities (where available) places Vienna in the upper range at approximately the same level as Hamburg, Cologne and London for women, while for men, it is in the middle range, together with Hamburg, Cologne, Rome, Milan and London.

Fig. 6: Life expectancy in Vienna compared to other European cities, gender-differentiated, 1998–2000[1)]



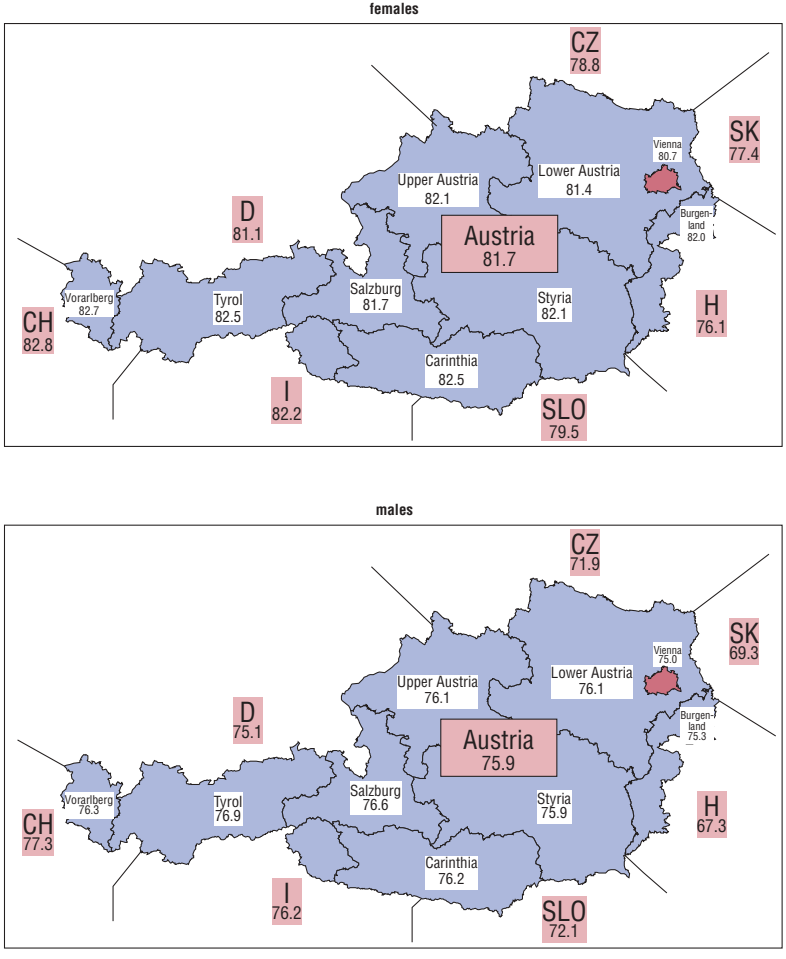
1) Unification depending on availability of data. – Vienna, Cologne, Bonn, Düsseldorf, London, Stockholm: average 1998–2000; Oslo and Copenhagen: average 1996–2000; Warsaw: average 1999–2001; Hamburg and Berlin: average 1998–1999. Milan and Rome: last available data from 1998. For some cities (e. g. Milan, Rome, Hamburg), the figures refer to the administrative district or region.

Source: National statistics institutes – Austria: Statistics Austria; Italy: ISTAT–Istituto Nazionale di Statistica; Germany: Statistisches Bundesamt, Robert Koch-Institut, Landesinstitut für den Öffentlichen Gesundheitsdienst NRW; Czech Republic: UZIS–Institute of Health Information and Statistics of the Czech Republic; Poland: GUS–Central Statistical Office of Poland; Norway: Statistics Norway; Sweden: SCB–Statistics Sweden; Denmark: Statistics Denmark.

Austria´s Position among European Countries

Compared with its neighbouring countries, Austria is markedly in the upper range regarding life expectancy, comparable to Germany, Italy and Switzerland. Of Austria´s seven neighbouring countries, Switzerland has by far the highest life expectancy, while Hungary has the lowest by far. This reflects the west-east gap visible within Austria.

Fig. 7: Gender-differentiated life expectancy in Austria and the neighbouring countries, 2001[1)]

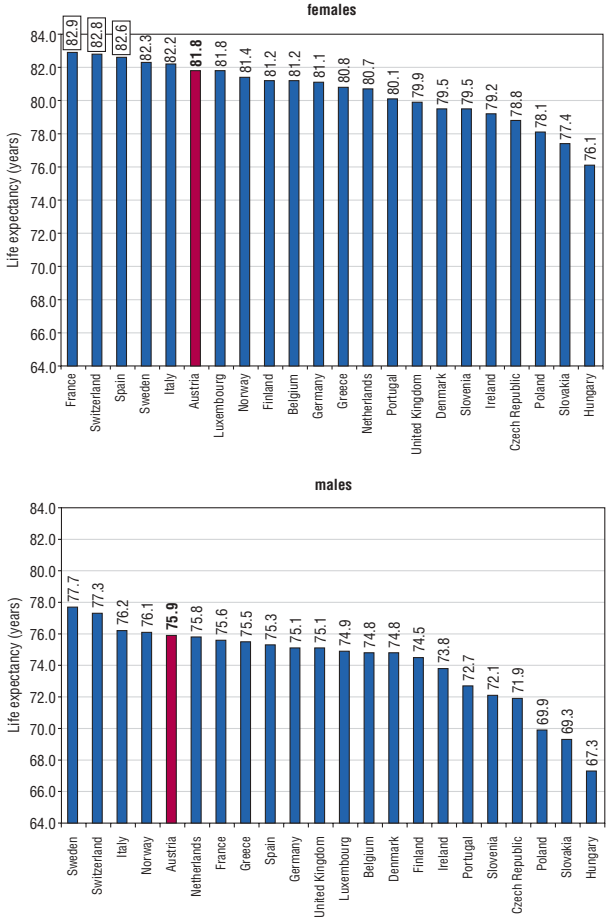


1) Without Principality of Liechtenstein.

Source: Statistics Austria; WHO – World Health Report 2002.

In a comparison of life expectancy in Europe, Austria ranks relatively high. In terms of female life expectancy, Austria ranks sixth together with Luxembourg; in terms of male life expectancy it has in the last years advanced to rank 5, approximately equal to Italy, Norway, the Netherlands and France.

Fig. 8: Life expectancy in Austria compared to other European countries 2001, by gender



Source: WHO – The World Health Report 2002.

Life Expectancy

The following maps of Europe illustrate the regional distribution of life expectancy in the individual countries by gender. (Due to gender-specific differences in the ranking of the individual countries, a gender-differentiated representation was chosen.)

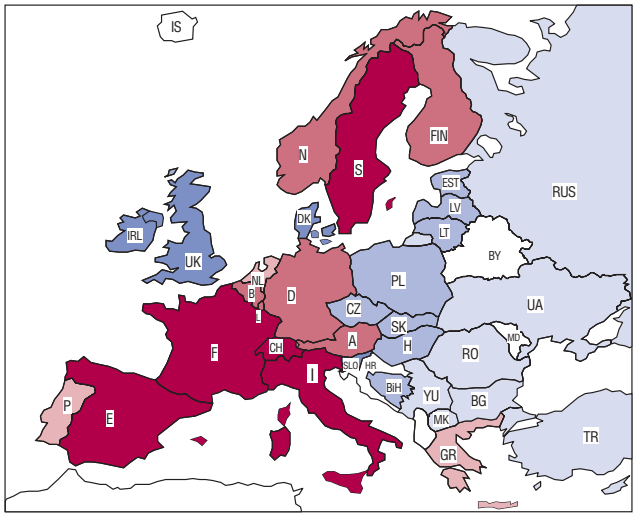
Switzerland, Sweden and Italy present a particularly high life expectancy for both genders. In terms of female life expectancy, France and Spain (82 years and over) are at the top of the table, while Norway has a very high male life expectancy (76 years and over).

Above average figures for overall life expectancy for both sexes can also be found in Austria and Germany, for female life expectancy in Luxembourg, Norway, Finland and Belgium (81 years and over), and for male life expectancy in the Netherlands, France, Greece, Spain and United Kingdom (75 years and over).

Austria´s eastern neighbours, however, still present a particularly low life expectancy. While Slovenia and the Czech Republic, and to a lower extent Slovakia as well, are clearly catching up, life expectancy in Hungary, the former Yugoslavian countries and Eastern European countries in general is still far below the European average.

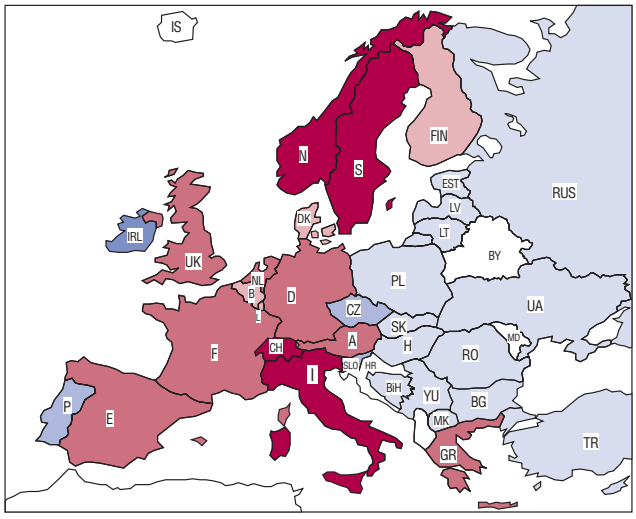
Fig. 9: Life expectancy at birth in Europe[1)] 2001, by gender

females



Countries	Life expectancy
France, Switzerland, Spain, Sweden, Italy	82 years and over
Austria, Luxembourg, Norway, Finland, Belgium, Germany	81.0–81.9 years
Greece, Netherlands, Portugal	80.0–80.9 years
United Kingdom, Denmark, Slovenia, Ireland	79.0–79.9 years
Czech Republic, Poland, Lithuania, Slovakia, Estonia, Bosnia and Herzegovina, Hungary, Latvia	76.0–78.9 years
FYR of Macedonia, Yugoslavia, Bulgaria, Romania, Ukraine, Russian Federation, Turkey	less than 76 years

males



Countries	Life expectancy
Sweden, Switzerland, Italy, Norway	76 years and over
Austria, Netherlands, France, Greece, Spain, Germany, United Kingdom	75.0–75.9 years
Luxembourg, Belgium, Denmark, Finland	74.0–74.9 years
Ireland	73.0–73.9 years
Portugal, Slovenia, Czech Republic	70.0–72.9 years
Poland, Yugoslavia, Slovakia, Bosnia and Herzegovina, FYR of Macedonia, Bulgaria, Romania, Lithuania, Hungary, Turkey, Estonia, Ukraine, Latvia, Russian Federation	less than 70 years

1) Including Southern and Eastern Europe, plus Turkey and former USSR countries.

Source: WHO – The World Health Report 2002.

Table 2: Life expectancy at birth in Europe[1)] 2001, by gender and ranking

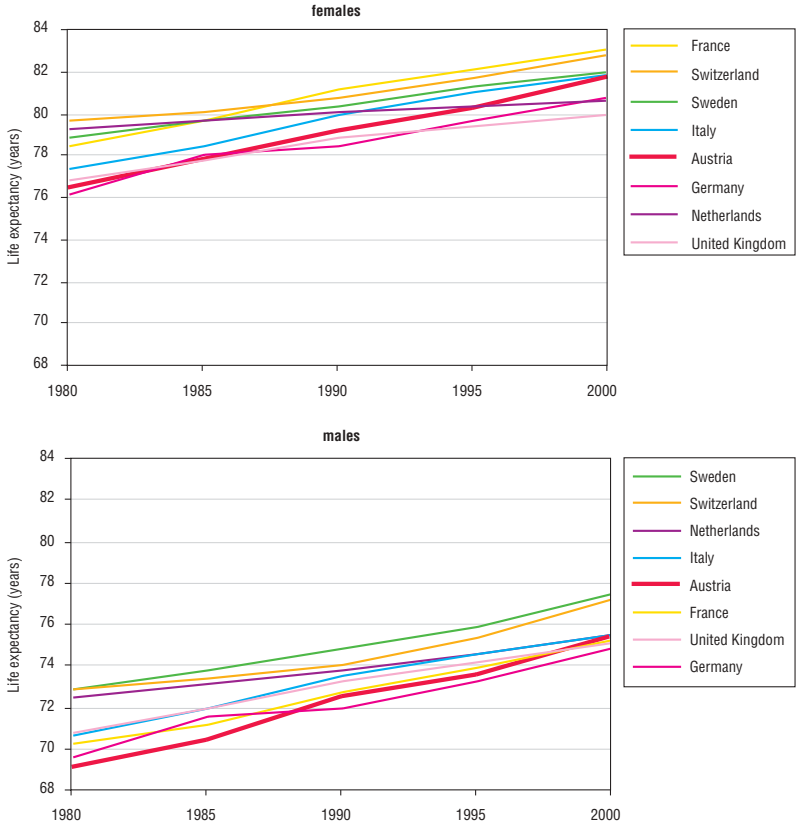
Life expectancy at birth (years)			
females		males	
countries	years	countries	years
France	82.9	Sweden	77.7
Switzerland	82.8	Switzerland	77.3
Spain	82.6	Italy	76.2
Sweden	82.3	Norway	76.1
Italy	82.2	Austria	75.9
Austria	81.8	Netherlands	75.8
Luxembourg	81.8	France	75.6
Norway	81.4	Greece	75.5
Finland	81.2	Spain	75.3
Belgium	81.2	Germany	75.1
Germany	81.1	United Kingdom	75.1
Greece	80.8	Luxembourg	74.9
Netherlands	80.7	Belgium	74.8
Portugal	80.1	Denmark	74.8
United Kingdom	79.9	Finland	74.5
Denmark	79.5	Ireland	73.8
Slovenia	79.5	Portugal	72.7
Ireland	79.2	Slovenia	72.1
Czech Republic	78.8	Czech Republic	71.9
Poland	78.1	Poland	69.9
Lithuania	77.9	Yugoslavia	69.7
Slovakia	77.4	Slovakia	69.3
Estonia	76.5	Bosnia and Herzegovina	69.3
Bosnia and Herzegovina	76.4	FYR of Macedonia	68.9
Hungary	76.1	Bulgaria	68.4
Latvia	76.0	Romania	67.8
FYR of Macedonia	74.9	Lithuania	67.7
Yugoslavia	74.8	Hungary	67.3
Bulgaria	74.8	Turkey	67.0
Romania	74.5	Estonia	65.7
Ukraine	73.3	Ukraine	62.2
Russian Federation	72.3	Latvia	65.2
Turkey	71.2	Russian Federation	58.9

1) Including Southern and Eastern Europe, plus Turkey and former USSR countries.

Source: WHO – World Health Report 2002.

The comparison of the development of life expectancy in the last two decades in individual reference countries shows a remarkable and strong increase of life expectancy in Austria for both women and men. While in the 1980s, Austria was still below average (ranking last among the selected reference countries), it has caught up, even surpassing Germany (whose figures dropped slightly due to the new Länder) in 1990, and now ranks relatively high for both women and men, right behind Italy and Sweden.

Fig. 10: Life expectancy at birth in Austria and selected European countries, by gender, 1980–2000[1)]



1) Most recent data available (Italy: 1998; Germany and United Kingdom: 1999; others: 2000).

Source: OECD Health Data 2002; additionally for Austria: Statistics Austria; Germany: Statistisches Bundesamt/Robert Koch Institut; United Kingdom: National Statistics Online, Population Trends – Autumn 2002; Netherlands: Centraal Bureau voor de Statistiek; France: INSEE, www.insee.fr/fr/ffc/pop_age3.htm; Italy: ISTAT-Centro diffusione dati, www.demo.istat.it; Switzerland: Bundesamt für Statistik.

Table 3: Development of life expectancy at birth in Austria and other European countries[1)], 1980–2001, by gender

Country	Life expectancy at birth (years)									
	1980/81	1985/86	1990/91	1995	1996	1997	1998	1999	2000	2001
	Females									
Austria[2)]	76.1	77.3	78.9	80.1	80.2	80.6	80.9	80.9	81.2	81.7
Belgium[3)]	76.8	78.0	79.4	80.2	80.5	80.6	80.5	80.8	–	–
Czech Republic[3)]	73.9	74.7	75.4	76.6	77.3	77.5	78.1	78.1	78.4	–
Denmark[3)]	77.3	77.5	77.7	77.8	78.2	78.4	78.8	79.0	–	–
Finland[3)]	77.6	78.7	78.9	80.2	80.5	80.5	80.8	81.0	–	–
France[5)]	78.4	79.4	81.0	81.9	82.1	82.3	82.4	82.5	82.7	83.0
Germany[4)]	76.1	78.1	78.4	79.7	79.9	80.3	80.5	80.8		
Greece[3)]	76.8	78.4	79.5	80.3	80.4	80.8	80.6	–	–	–
Hungary[3)]	72.7	73.1	73.7	74.5	74.7	75.1	75.2	75.1	75.6	–
Ireland[3)]	75.6	76.7	77.6	78.4	78.6	78.6	79.1	79.1	–	–
Italy[7)]	77.4	78.4	80.0	81.0	81.3	81.6	81.8	–	–	–
Luxembourg[3)]	75.9	77.9	78.5	80.2	79.9	79.8	80.5	81.2	–	–
Netherlands[8)]	79.2	79.7	80.1	80.4	80.4	80.6	80.7	80.5	80.6	80.7
Norway[3)]	79.2	79.4	79.8	80.8	81.1	81.1	81.3	81.1	81.4	–
Poland[10)]	74.4	74.8	75.5	76.4	76.6	77.0	77.3	77.5	78.0	–
Portugal[3)]	75.2	76.4	77.4	78.6	78.6	78.8	78.9	79.1	–	–
Slovakia[3)]	74.3	74.7	75.4	76.3	76.8	76.7	76.7	77.0	77.2	–
Slovenia[11)]	75.2	75.9	77.4	77.8	78.3	78.6	78.7	78.8	79.1	79.6
Spain[3)]	78.6	79.6	80.4	81.5	81.7	81.9	82.2	82.4	–	–
Sweden[3)]	78.8	79.7	80.4	81.3	81.5	81.8	81.9	81.9	82.0	–
Switzerland[9)]	79.6	80.1	80.7	81.7	82.0	82.1	82.4	82.5	82.8	82.8
United Kingdom[6)]	76.8	77.7	78.8	79.4	79.5	79.6	79.8	80.0	–	–

continued

1) European Union and Switzerland, Norway, Czech Republic, Slovakia, Hungary and Poland.

2) Statistics Austria, relevant years 1980/85/90.

3) OECD Health Data 2002, relevant years 1980/85/90.

4) Germany: For 1980 and 1985 (FRG): OECD Health Data 2002. Since 1990 (all of Germany): Statistisches Bundesamt, Mortality statistics.

5) France: INSEE – Institut national de la statistique et des études économiques, relevant years 1980/85/90. Data for 2000 and 2001 provisional.

6) United Kingdom (Great Britain and Northern Ireland): ONS – National Statistics Online, Population Trends – Autumn 2002. Relevant years 1981/86/91. Data for 1999 provisional.

7) Italy: OECD Health Data 2002, relevant years 1980/85/90. Since 1998: ISTAT – Istituto Nazionale di Statistica, <http://www.demo.istat.it/e/tav2000/start.html>

8) Netherlands: 1980 and 1985: OECD Health Data 2002; since 1990: Centraal Bureau voor de Statistiek.

9) Switzerland: 1980–1999: OECD Health Data 2002, relevant years 1980/85/90. For 2000 and 2001: Bundesamt für Statistik, mortality table 2000/2001.

10) Poland: OECD Health Data 2002, relevant years 1980/85/90. For 1999 and 2000: Central Statistical Office of Poland.

11) Slovenia: Statistical Office of the Republic of Slovenia. 2 year averages.

Source: OECD Health Data 2002 and national statistics institutes (cf. footnotes to the individual countries).

Table 3: (continued) Development of life expectancy at birth in Austria and other European countries[1)], 1980–2001, by gender

Country	Life expectancy at birth (years)									
	1980/81	1985/86	1990/91	1995	1996	1997	1998	1999	2000	2001
	Males									
Austria[2)]	69.0	70.4	72.4	73.5	73.9	74.3	74.7	75.1	75.4	75.9
Belgium[3)]	70.0	71.1	72.7	73.4	73.8	74.1	74.3	74.4	–	–
Czech Republic[3)]	66.8	67.5	67.6	69.7	70.4	70.5	71.1	71.4	71.7	–
Denmark[3)]	71.2	71.5	72.0	72.7	73.1	73.6	73.9	74.2	–	–
Finland[3)]	69.2	70.1	70.9	72.8	73.0	73.4	73.5	73.8	–	–
France[5)]	70.2	71.2	72.7	73.9	74.1	74.6	74.8	75.0	75.2	75.5
Germany[4)]	69.6	71.5	72.0	73.3	73.6	74.0	74.5	74.8	–	–
Greece[3)]	72.2	73.5	74.6	75.0	75.1	75.6	75.5	–	–	–
Hungary[3)]	65.5	65.1	65.1	65.3	66.6	66.4	66.1	66.3	67.1	–
Ireland[3)]	70.1	71.0	72.1	72.9	73.1	73.4	73.5	73.9	–	–
Italy[7)]	70.6	72.0	73.5	74.6	75.0	75.3	75.5	–	–	–
Luxembourg[3)]	69.1	70.6	72.3	73.0	73.3	74.1	73.7	74.7	–	–
Netherlands[8)]	72.5	73.1	73.8	74.6	74.7	75.2	75.2	75.3	75.5	75.8
Norway[3)]	72.3	72.6	73.4	74.8	75.4	75.4	75.5	75.6	76.0	–
Poland[10)]	66.0	66.5	66.5	67.6	68.1	68.5	68.9	68.8	69.7	–
Portugal[3)]	67.7	69.4	70.4	71.2	71.1	71.6	71.7	72.0	–	–
Slovakia[3)]	66.8	66.9	66.6	68.4	68.9	68.9	68.6	69.0	69.1	–
Slovenia[11)]	67.4	67.9	69.5	70.3	70.8	71.0	71.1	71.3	71.9	72.1
Spain[3)]	72.5	73.1	73.3	74.3	74.4	74.9	74.8	74.9	–	–
Sweden[3)]	72.8	73.8	74.8	75.9	76.5	76.7	76.9	77.0	77.4	–
Switzerland[9)]	72.8	73.4	74.0	75.3	75.9	76.3	76.3	76.8	77.2	77.2
United Kingdom[6)]	70.8	71.9	73.2	74.1	74.3	74.6	74.8	75.1	–	–

1) European Union and Switzerland, Norway, Czech Republic, Slovakia, Hungary and Poland.

2) Statistics Austria, relevant years 1980/85/90.

3) OECD Health Data 2002, relevant years 1980/85/90.

4) Germany: For 1980 and 1985 (FRG): OECD Health Data 2002. Since 1990 (all of Germany): Statistisches Bundesamt, Mortality statistics.

5) France: INSEE – Institut national de la statistique et des études économiques, relevant years 1980/85/90. Data for 2000 and 2001 provisional.

6) United Kingdom (Great Britain and Northern Ireland): ONS – National Statistics Online, Population Trends – Autumn 2002. Relevant years 1981/86/91. Data for 1999 provisional.

7) Italy: OECD Health Data 2002, relevant years 1980/85/90. Since 1998: ISTAT – Istituto Nazionale di Statistica, <http://www.demo.istat.it/e/tav2000/start.html>

8) Netherlands: 1980 and 1985: OECD Health Data 2002; since 1990: Centraal Bureau voor de Statistiek.

9) Switzerland: 1980–1999: OECD Health Data 2002, relevant years 1980/85/90. For 2000 and 2001: Bundesamt für Statistik, mortality table 2000/2001.

10) Poland: OECD Health Data 2002, relevant years 1980/85/90. For 1999 and 2000: Central Statistical Office of Poland.

11) Slovenia: Statistical Office of the Republic of Slovenia. 2 year averages.

Source: OECD Health Data 2002 and national statistics institutes (cf. footnotes to the individual countries).

Healthy Life Expectancy

In the last two decades, Austria saw a marked increase in life expectancy, remarkable also in international comparison. This can be attributed mainly to the decrease in mortality in the higher adult age. Apart from the longer average life span, however, the quality of the gained life years must be taken into account.

In the World Health Report 2002, the World Health Organization shows the healthy life expectancy (HALE – Health Adjusted Life Expectancy) and the lost healthy years (LHE) for all member states for 2000 and 2001 (estimates).

Healthy life expectancy at birth in Austria is 73 years for female and 69 years for male newborns. The further HALE at age 60 in Austria is nearly 18 years for women and nearly 16 years for men. Thus, women spend nearly 9 years (10.7 percent of their life expectancy) and men 7 years (9.3 percent of their life expectancy) in poor health (i.e. lost healthy years).

Within the European Union, Austria ranks sixth for men with a healthy life expectancy at birth of 68.9 years, and third with a further healthy life expectancy at age 60 of 15.7 years. With 7.0 expected lost healthy years at birth, Austria ranks tenth, ex aequo with Italy. Austria ranks fourth with a percentage of total life expectancy lost of 9.3 percent.

For women, the situation is markedly better: A HALE at birth of 73.0 years places Austria in third place, ex aequo with Spain, and with 18.5 years of further HALE at age 60, it even shares the second place with Sweden. With 8.8 years of LHE at birth for women, Austria ranks second within the countries with the lowest values, ex aequo with Finland. And finally, Austria has the lowest percentage of total life expectancy lost of all EU countries, i.e. 10.7 percent.

The following table shows selected data for the EU member states and other countries. Fig. 11 and 12 illustrate the regional differences in healthy life expectancy in different European countries.

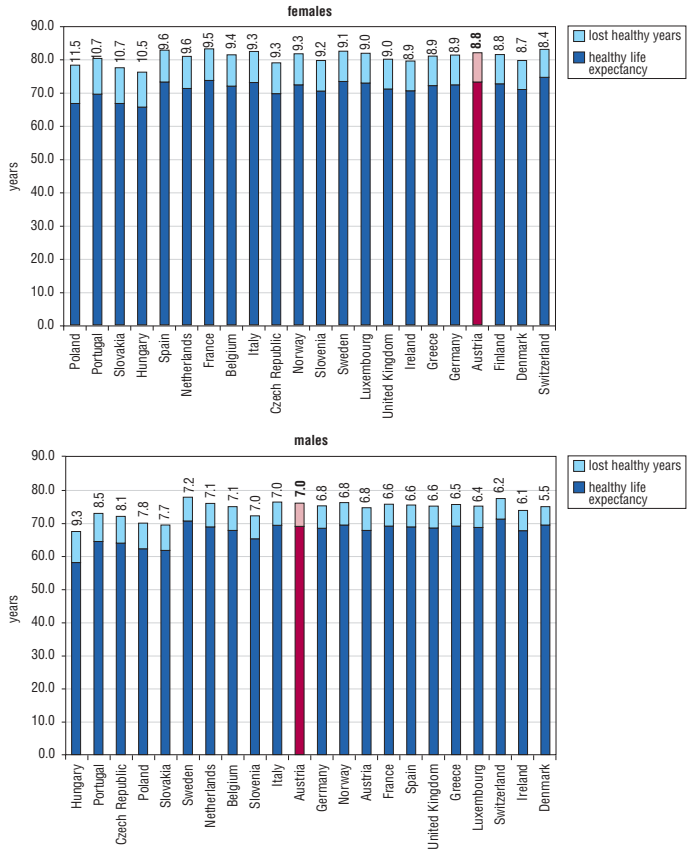
Table 4: Healthy life expectancy, estimates for 2000 and 2001 (WHO)

Country	Healthy life expectancy (HALE) (years)				Expectation of lost healthy years at birth (years)		Percentage of total life expectancy lost	
	Males		Females		2001		2001	
	At birth	At age 60	At birth	At age 60	Males	Females	Males	Females
European Union								
Austria	68.9	15.7	73.0	18.5	7.0	8.8	9.3	10.7
Belgium	67.7	14.8	71.8	17.8	7.1	9.4	9.5	11.6
Denmark	69.3	15.5	70.8	16.7	5.5	8.7	7.3	10.9
Finland	67.7	15.2	72.5	18.1	6.8	8.8	9.1	10.8
France	69.0	16.1	73.5	19.1	6.6	9.5	8.7	11.4
Germany	68.3	15.0	72.2	17.7	6.8	8.9	9.1	10.9
Greece	69.0	15.7	71.9	17.1	6.5	8.9	8.6	11.0
Ireland	67.6	13.9	70.4	16.1	6.1	8.9	8.3	11.2
Italy	69.2	15.5	72.9	18.2	7.0	9.3	9.2	11.3
Luxembourg	68.6	15.1	72.7	18.3	6.4	9.0	8.5	11.1
Netherlands	68.7	15.0	71.1	17.3	7.1	9.6	9.4	11.9
Portugal	64.3	13.4	69.4	16.2	8.5	10.7	11.7	13.4
Spain	68.7	15.2	73.0	18.2	6.6	9.6	8.8	11.6
Sweden	70.5	16.5	73.2	18.5	7.2	9.1	9.2	11.1
United Kingdom	68.4	15.0	70.9	16.9	6.6	9.0	8.8	11.3
other European countries, USA and Japan								
Albania	55.9	8.8	61.5	12.7	10.4	11.7	15.7	16.0
Bosnia and Herzegowina	60.0	11.3	64.9	14.3	9.3	11.5	13.4	15.0
Bulgaria	60.8	11.5	65.2	13.9	7.5	9.6	11.0	12.8
Croatia	59.7	10.1	66.9	14.4	9.2	10.2	13.3	13.3
Czech Republic	63.8	12.8	69.5	16.0	8.1	9.3	11.3	11.8
Estonia	58.0	11.1	66.1	15.0	7.7	10.4	11.7	13.6
Hungary	58.0	10.4	65.5	14.4	9.3	10.5	13.8	13.9
Japan	71.4	17.1	75.8	20.7	6.5	8.9	8.3	10.6
Lithuania	56.9	11.0	65.4	14.8	10.8	12.6	16.0	16.1
Norway	69.3	15.6	72.2	17.9	6.8	9.3	8.9	11.4
Poland	62.1	11.9	66.6	14.6	7.8	11.5	11.1	14.7
Romania	58.6	11.1	63.3	13.5	9.2	11.2	13.6	15.1
Russian Federation	51.5	8.5	61.9	12.7	7.4	10.4	12.6	14.4
Slovakia	61.6	11.5	66.6	14.6	7.7	10.7	11.1	13.9
Slovenia	65.1	13.3	70.3	16.6	7.0	9.2	9.7	11.6
Switzerland	71.1	16.9	74.4	19.4	6.2	8.4	8.0	10.2
Turkey	58.5	11.2	61.1	12.4	8.5	10.1	12.7	14.2
Ukraine	52.9	8.8	61.8	12.2	9.3	11.5	14.9	15.6
USA	66.4	14.9	68.8	16.6	8.0	10.7	10.8	13.5
Yugoslavia	60.7	11.0	63.6	12.8	9.0	11.2	13.0	15.0

Source: WHO – The World Health Report 2002.

The following graph shows Austria´s position in comparison with other European countries. With a high overall life expectancy for both men and women, Austria ranks near the top, right after France, Sweden, Switzerland, Italy and Norway. In terms of healthy life expectancy, Austria ranks very high for women. The figures for men, while above average together with Slovenia and Italy, do not equal the favourable figures for women.

Fig. 11: Healthy life expectancy at birth and lost healthy years, Austria compared to other European countries 2001, by gender

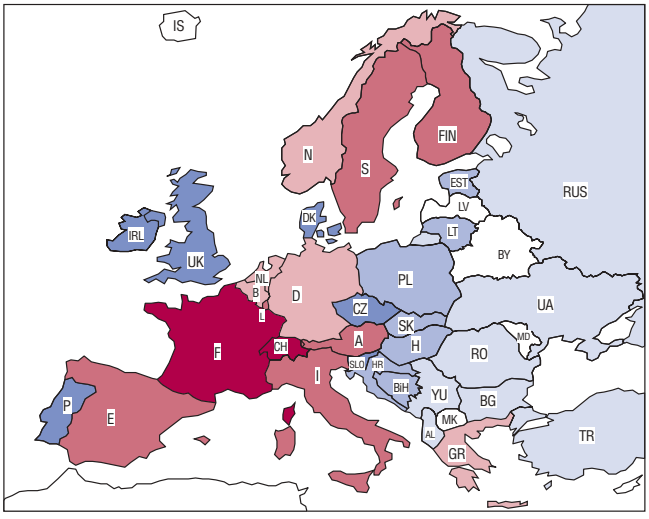


Source: WHO – The World Health Report 2002.

The following maps of Europe show the gender-differentiated healthy life expectancy at age 60 in the individual countries (Europe and former USSR countries). The maps very clearly illustrate the differences in this region. France and Switzerland present the highest overall values; for men, Sweden ranks near the top, as well. But Austria, Finland, Italy, Luxembourg, Sweden and Spain also rank high for both genders, and Denmark, Germany, Greece, the United Kingdom, the Netherlands and Norway for men.

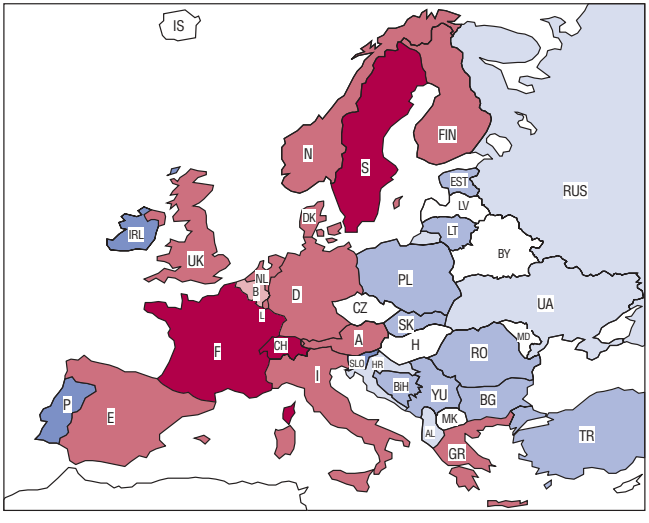
Fig. 12: Healthy life expectancy at age 60, Europe[1)] 2001, by gender

females



Countries	further healthy life expectancy
France, Switzerland	19 years and over
Austria, Finland, Italy, Luxembourg, Sweden, Spain	18.0–18.9 years
Belgium, Germany, Greece, Netherlands, Norway	17.0–17.9 years
Denmark, United Kingdom, Ireland, Portugal, Slovenia, Czech Republic	16.0–16.9 years
Poland, Slovakia, Hungary, Croatia, Bosnia and Herzegovina, Estonia, Lithuania	14.0–15.9 years
Romania, Bulgaria, Yugoslavia, Albania, Ukraine, Russian Federation, Turkey	less than 14 years

males



Countries	further healthy life expectancy
France, Switzerland, Sweden	16 years and over
Austria, Denmark, Germany, Finland, Greece, United Kingdom, Italy, Luxembourg, Netherlands, Spain, Norway	15.0–15.9 years
Belgium	14.0–14.9 years
Ireland, Portugal, Slovenia	13.0–13.9 years
Poland, Slovakia, Romania, Bulgaria, Bosnia and Herzegovina, Yugoslavia, Estonia, Lithuania, Turkey	11.0–12.9 years
Croatia, Albania, Ukraine, Russian Federation	less than 11 years

1) Including Southern and Eastern Europe, plus Turkey and former USSR countries.

Source: WHO – World Health Report 2002.

Mortality

Infant Mortality

The following graph illustrates that infant mortality in Vienna – just as in nearly all major cities – lies somewhat above the national average. In some years, however, the rate is approximately equal to, occasionally even better than the Austrian mean. Particularly in male infant mortality the proportion has fluctuated strongly over the last years.

Fig. 13: Infant mortality in Vienna and Austria by gender, 1982–2001



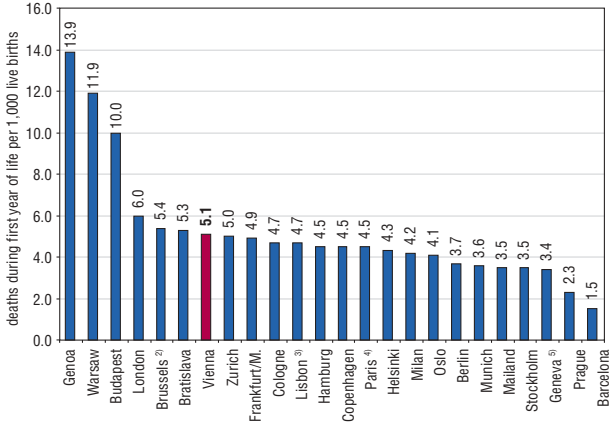
Source: Statistics Austria.

In the last two decades, infant mortality has dropped significantly in Vienna as well as in Austria as a whole. In Vienna, a decrease by approx. 58 percent can be noted for both boys and girls, and the national average is even higher, with 60 and 64 percent, respectively.

Vienna´s Position among European Cities

Compared with other European cities, the infant mortality of 5.1 (reference value 2000) places Vienna in the upper middle range. However, the figures for all other cities with available data – except for extremely high values in Genoa, Warsaw and Budapest (10 or more deaths per 1,000 live births) – are all very low, so that there are hardly any significant differences. Prague and Barcelona, however, have above-average favourable figures. Geneva, Stockholm, Milan, Munich and Berlin, also have very low infant mortality.

Fig. 14: Infant mortality in Vienna compared to other European cities, 1999/2000[1)]



1) Data depending on availability of census years. No data for Amsterdam, Rome and Dublin.

2) Région Bruxelles-capitale.

3) Lisboa e Vale do Tejo.

4) Île de France.

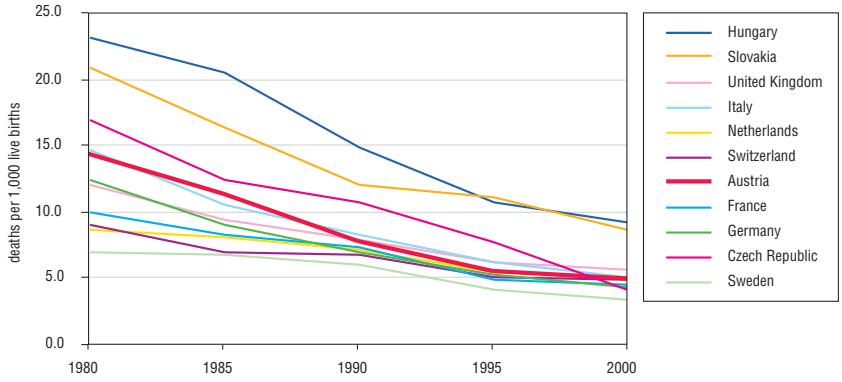
5) Canton of Geneva.

Source: City of Vienna Pocket Statistics, edition 2002.

Austria´s Position among European Countries

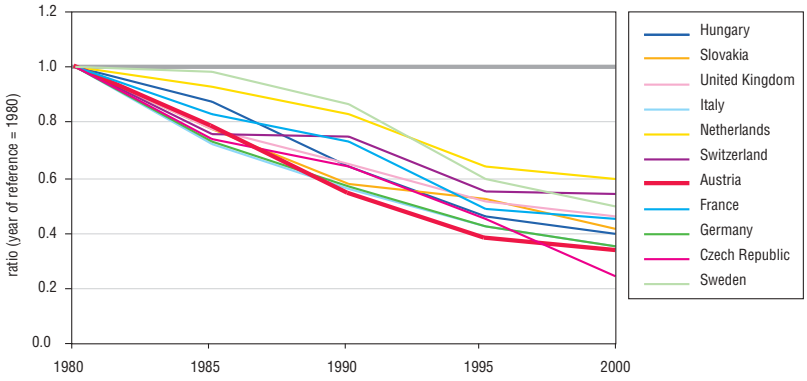
The significant drop in infant mortality (from 14.3 deaths per 1,000 live births in 1980 to 4.8 in 2000) is also remarkable on an international scale. The neighbouring Czech Republic also presents a similarly drastic development; from 16.9 in 1980 to 4.1 in 2000, i. e. lower than in Austria. The lowest figures can be found in Sweden (3.4), Norway (3.8) and Finland (3.8). With the exception of Hungary, Slovakia and Poland, infant mortality ranges between 4 and 6 deaths in the first year of life per 1,000 live births.

Fig. 15: Infant mortality in Austria and selected European countries 1980–2000



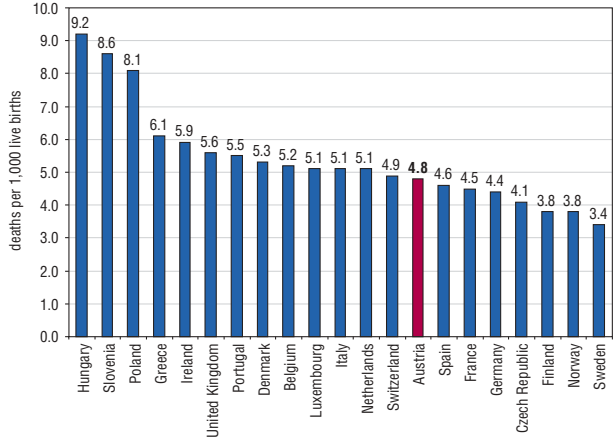
Source: OECD Health Data 2002.

Fig. 16: Relative development of infant mortality in Austria and selected European countries 1980–2000



Source: OECD Health Data 2002; own calculations.

Fig. 17: Infant mortality in Europe in 2000

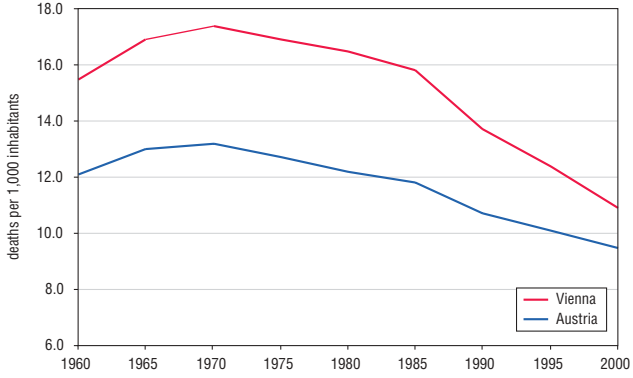


Source: OECD Health Data 2002.

Overall Mortality

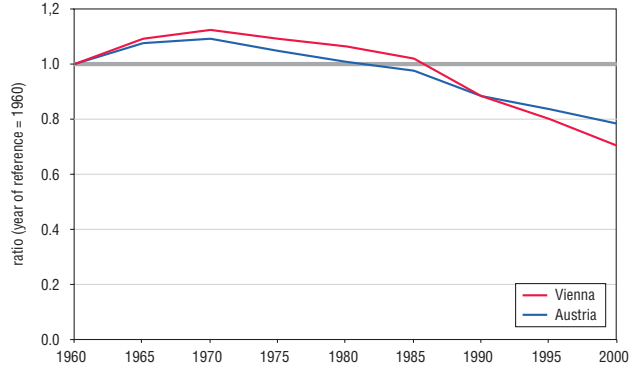
In the period from 1960 to 2000, overall mortality increased in Austria until 1980 and in Vienna until the mid-80s, but decreased markedly after that. Since 1980, mortality has decreased by 22 percent in Austria and 34 percent in Vienna.

Fig. 18: Deaths per 1,000 inhabitants in Vienna and Austria, 1960–2000



Source: Statistics Austria.

Fig. 19: Development of relative mortality in Vienna and Austria, 1960–2000

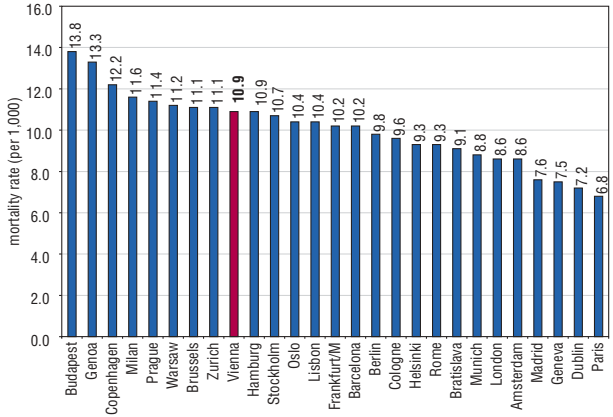


Source: Statistics Austria; own calculations.

Vienna´s Position among European Cities

With a mortality rate of 10.9 (per 1,000 inhabitants) in 2000, Vienna ranks in the upper range compared to other European cities, equal to Hamburg. Zurich and Brussels (both 11.1), as well as Stockholm (10.7), have similar rates. Paris has the lowest mortality rate (last available data, however, from 1998), but Dublin, Geneva and Madrid have very low figures, as well. Budapest and Genoa have the highest mortality rates, closely followed by Copenhagen.

Fig. 20: Mortality rate in different European cities[1) 2)]



1) Amsterdam: Groot-Amsterdam; Brussels: Région Bruxelles-capitale; Geneva: Canton of Geneva; Lisbon: Grande Lisboa; Paris: Île de France.

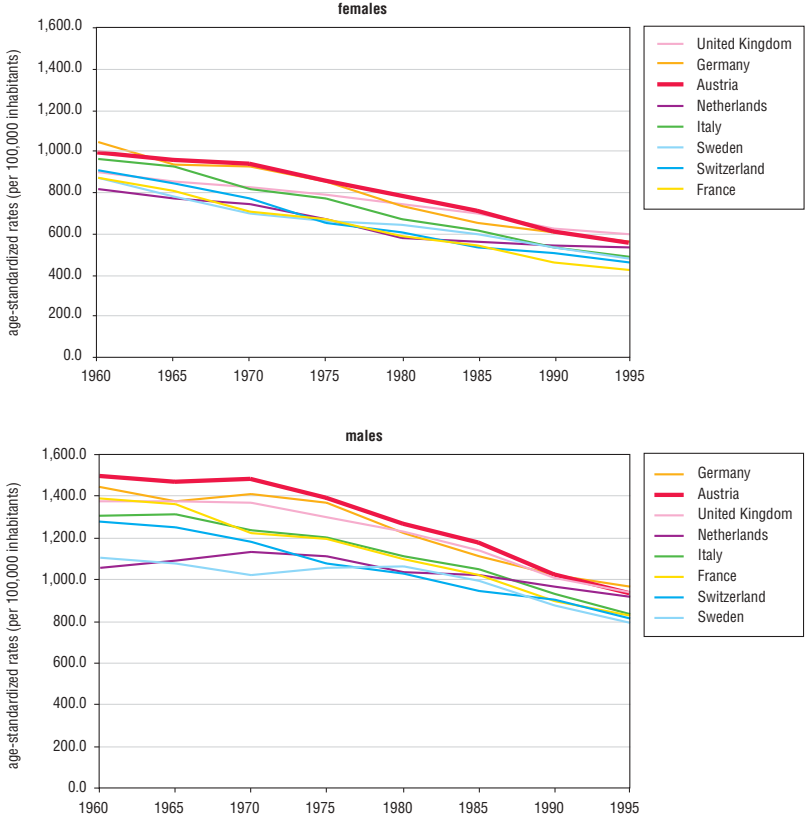
2) Year: Genoa, Copenhagen, Prague, Zurich, Vienna, Stockholm, Oslo, Lisbon, Frankfurt, Barcelona, Berlin, Helsinki, Bratislava, Munich, Amsterdam (2000); Budapest, Milan, Brussels, Hamburg, Rome, London, Geneva, Dublin (1999); Cologne, Madrid, Paris (1998); Warsaw (1997).

Source: City of Vienna Statistical Yearbook, edition 2002.

Austria´s Position among European Countries

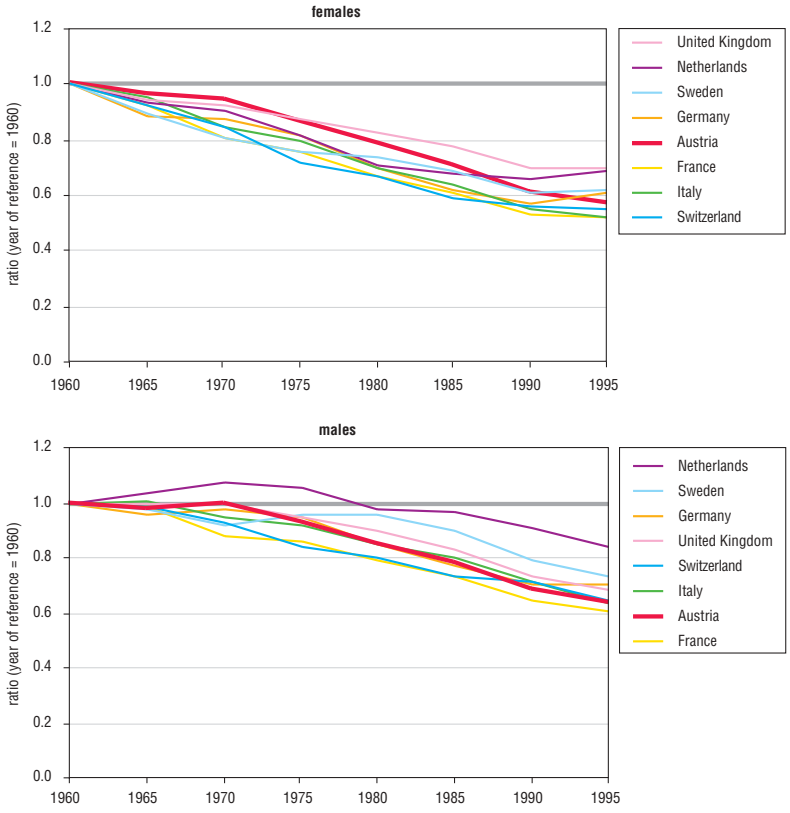
Of the selected European reference countries Germany, Switzerland, Italy, Netherlands, Sweden, France and the United Kingdom, the mortality rate in Austria – just as in Germany and the United Kingdom - was among the highest until the mid-1980s, despite the decrease from 1970 onwards *(cf. graph below)*. For women, France, Sweden and Switzerland have relatively constant low values; for men, Sweden, the Netherlands and Switzerland ranked best until the mid-1980s. Switzerland and Sweden were also the first two countries to fall below the 1,000 mark for male mortality in the mid-1980s.

Fig. 21: Development of mortality (all causes of death) in Austria and selected European countries **between 1960 and 1995**, age-standardized mortality rates (per 100,000 inhabitants), by gender



Source: OECD Health Data 2002.

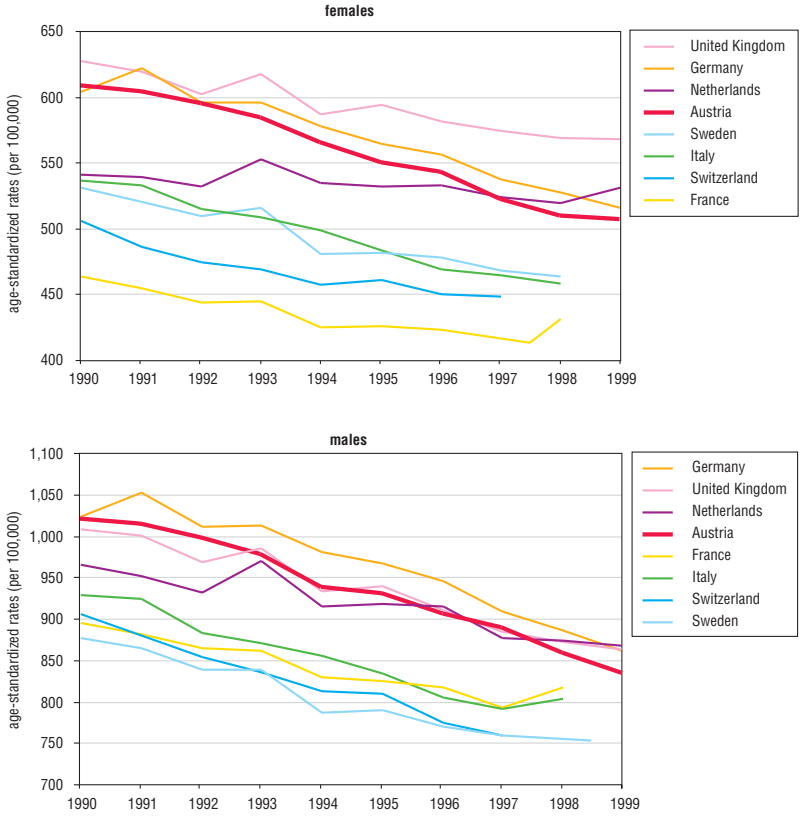
Fig. 22: Development of relative mortality (all causes of death) in Austria and selected European countries **between 1960 and 1995**, based on age-standardized mortality rates (per 100,000 inhabitants), by gender



Source: OECD Health Data 2002; own calculations.

A focus on the last decade makes the marked decrease in mortality for Austrian men and women since 1990 even more visible. Especially for Austrian women – as for Germany and Italy –, the marked drop relative to the other countries is particularly conspicuous. The fact that Austria presents better values than Germany is attributable to the influence of the new Länder.

Fig. 23: Development of mortality (all causes of death) in Austria and selected European countries **between 1990 and 1999**, age-standardized mortality rates (per 100,000 inhabitants), by gender

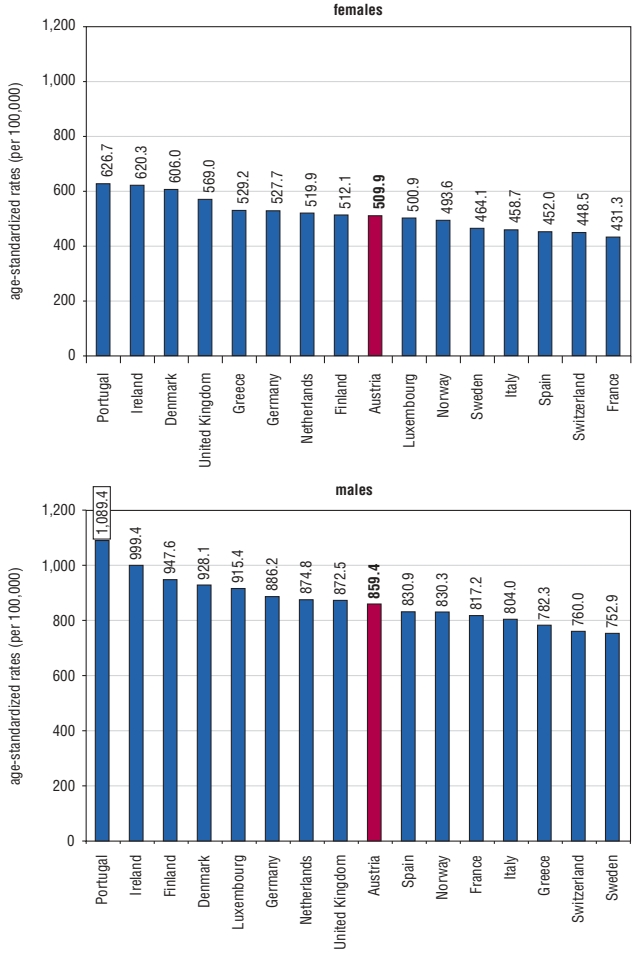


Source: OECD Health Data 2002.

In a comparison of all European Union Member States without Belgium[1] and including Switzerland and Norway in the reference year 1998, Austria ranks high, as well: In the upper middle range for overall mortality for both women and men.

[1] Last available data on overall mortality for Belgium from 1995 (OECD Health Data 2002).

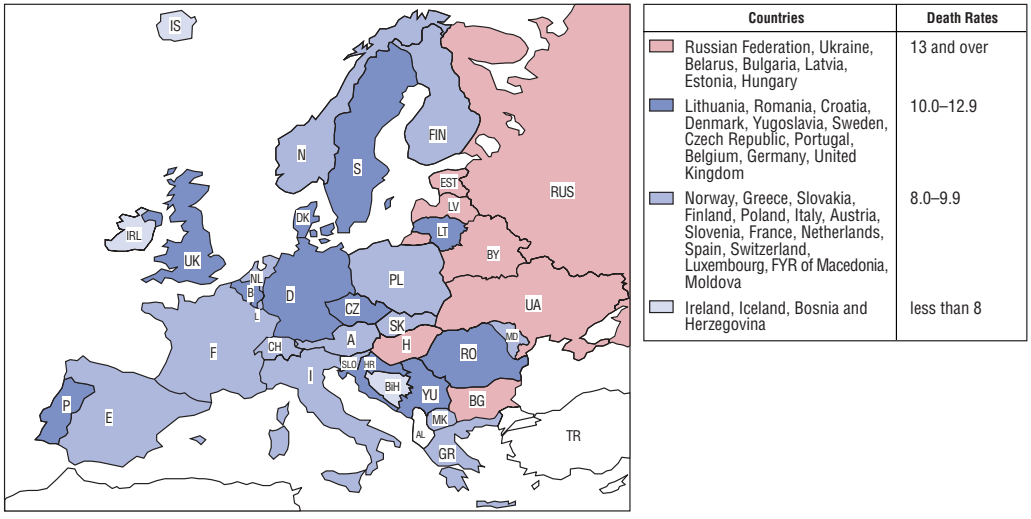
Fig. 24: Comparison of mortality (all causes of death) in Austria and other European countries in 1998[1)], age-standardized mortality (per 100,000 inhabitants), by gender



1) European Union without Belgium (no current data available) and including Switzerland and Norway. Due to incomplete availability of newer data, 1998 was selected as year of reference.

Source: OECD Health Data 2002.

Fig. 25: Europe: Death rates for 2001 (deaths per 1,000 inhabitants)



Countries	Death Rates
Russian Federation, Ukraine, Belarus, Bulgaria, Latvia, Estonia, Hungary	13 and over
Lithuania, Romania, Croatia, Denmark, Yugoslavia, Sweden, Czech Republic, Portugal, Belgium, Germany, United Kingdom	10.0–12.9
Norway, Greece, Slovakia, Finland, Poland, Italy, Austria, Slovenia, France, Netherlands, Spain, Switzerland, Luxembourg, FYR of Macedonia, Moldova	8.0–9.9
Ireland, Iceland, Bosnia and Herzegovina	less than 8

Source: Statistics Austria, Statistical Yearbook 2003.

Causes of Death

While at the turn of the previous century, infectious diseases, followed by maternal and infant mortality as well as occupational accidents, were the main causes of death for the Austrian population, the 1940s brought about a change in the spectrum of illnesses. Since then, the main causes of death in Austria – as in the other countries of Western Europe – are chronic-degenerative diseases (in particular cardiovascular diseases), followed by malignant neoplasms. Traffic and household accidents have increased, as well.

Despite a more or less marked decrease in all of the categories of most frequent causes of death in the last two decades, more than half of all deaths are due to cardiovascular diseases (especially heart conditions). The mortality figures show neoplasms (over 98 percent of them malignant) as the second most frequent cause of death – nearly one in four deaths are due to cancer, in all of Austria as well as in Vienna.

A decisive factor for this still significant increase of cardiovascular diseases and cancer is the marked increase of life expectancy and the accordingly growing proportion of the older population, as these types of diseases occur particularly in the second half of life and in old age.

The largest reduction was achieved in infant mortality. Significant changes have also taken place since the beginning of the 20th century regarding infectious diseases. This is not only true for Austria, but for all industrialized countries.

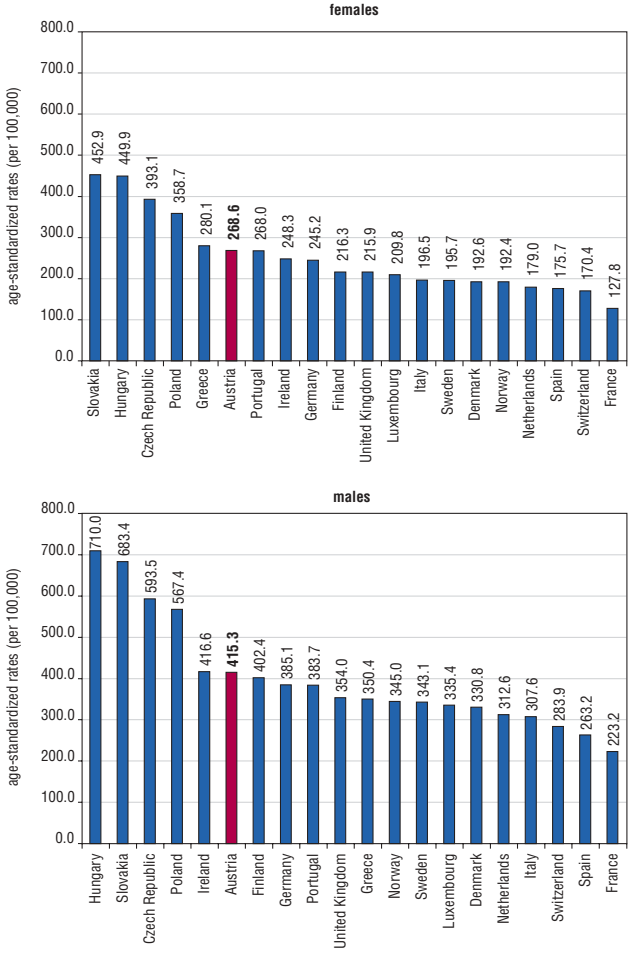
In Austria in 1900, more than 50 percent of the population died of an infectious disease. The situation, however, was significantly better in Vienna – compared to the overall Austrian figures as well as to those of other European cities: in 1900, "only" one in three deaths were due to an infectious disease (in particular tuberculosis, followed by a wide margin by measles, diphtheria, pertussis, scarlet fever and typhoid fever). With the improvement of sanitary conditions from the mid-19th century on, the introduction of a sanitary law for all of Austria in 1870, and the inauguration of the *I. Wiener Hochquellenwasserleitung* (1st Vienna spring water duct) in 1873, the public health system in Vienna achieved model character in Europe. Today, infectious diseases account for only 0.3 percent of all deaths in Austria, and 0.5 percent in Vienna.

As in nearly all of Europe, accident-related mortality has increased in Austria in the last decades. This increase is mainly due to a higher number of traffic accidents. In 1970, Austria had the highest number of accidents of all types in Europe, while today the figure is near the European average.

Austria´s Position among European Countries

The following graphs show Austria´s position in Europe (especially EU countries) concerning cardiovascular diseases and cancer. The incidence of cardiovascular diseases is relatively high for both women and men, while the cancer rate is near the European average.

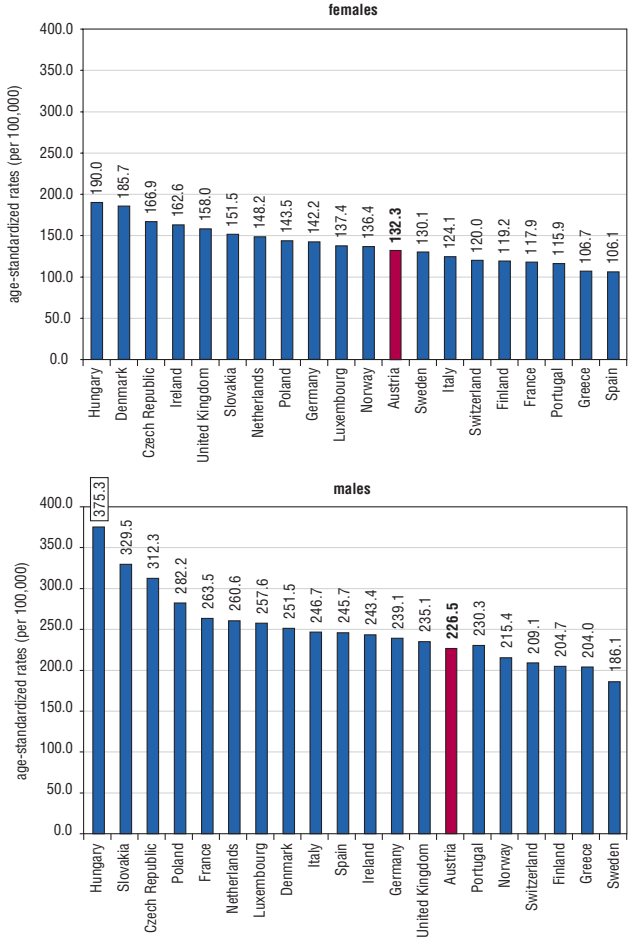
Fig. 26: Cardiovascular diseases, comparison of mortality in Austria and other European countries 1998[1)], age-standardized mortality rates (per 100,000 inhabitants), by gender



1) Due to incomplete availability of newer data, 1998 was selected as year of reference. Belgium is not included in this graph due to a lack of current data. Switzerland: most recent data for 1997; Poland: data for 1999.

Source: OECD Health Data 2002.

Fig. 27: Malignant neoplasms, comparison of mortality in Austria and other European countries 1998[1)], age-standardized mortality rates (per 100,000 inhabitants), by gender



1) Due to incomplete availability of newer data, 1998 was selected as year of reference. Belgium is not included in this graph due to a lack of current data. Switzerland: most recent data for 1997; Poland: data for 1999.

Source: OECD Health Data 2002.

Avoidable Mortality and Lost Life Years

A large number of causes of death could be avoided through appropriate preventive measures and early detection, medical interventions or through a change of individual lifestyles (in particular in the fields of smoking, alcohol consumption, nutrition, exercise, and risky behaviour) and health relevant behaviour.

A recent study by NOLTE & McKEE shows that 34 groups of causes of death can be rated as avoidable through health care – including numerous infectious diseases, some types of cancer, diabetes mellitus, ischemic heart diseases, cerebrovascular diseases, diseases of the respiratory organs, etc. While the figures on avoidable mortality calculated for Austria and the western part of Germany in this study show a reduction in all three categories of causes since 1980, the prevalence is still remarkably high – especially for men, where the rates are nearly twice as high as for women. In 1998, avoidable mortality in Austria was 505.3 for men and 240.8 for women (per 100,000).

Contrasted with western Germany (old Länder only), the positive development in Austria is especially conspicuous: While in 1980, Austria still had a markedly higher rate of avoidable mortality than Germany (+5.4 percent for men, +4.5 percent for women), the situation has changed strongly, especially during the last decade. By the end of the 1990s, the rates for Austria had fallen below those of western Germany, for men (–2.7 percent), and in particular for women (–7.3 percent).

Table 5: Age-standardized mortality rates (per 100,000)[1)] for selected causes and cause-groups in Austria and western Germany in 1980, 1990 and 1997/98, age groups 0–74 years.

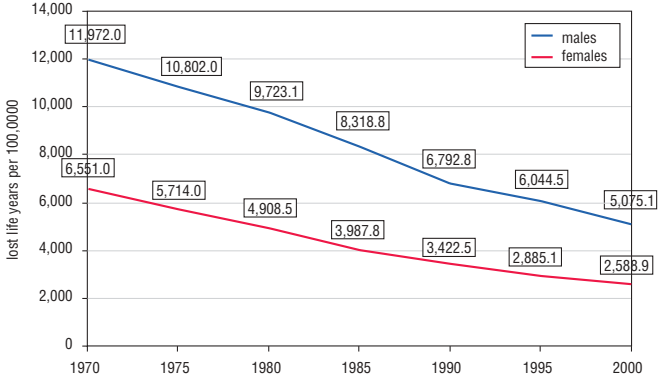
Causes of death and categories of causes of death	Austria			Western Germany		
	1980	1990	1998	1980	1990	1997
Males						
causes of death avoidable through health care	164.05	100.94	76.39	135.01	86.62	76.37
ischemic heart disease	150.12	122.67	105.70	164.53	119.47	94.00
other causes	475.68	387.95	323.26	449.72	391.34	348.98
all causes of death	789.85	611.55	505.34	749.26	597.43	519.35
Females						
causes of death avoidable through health care	128.54	89.30	69.41	118.44	85.38	74.39
ischemic heart disease	47.37	39.11	32.65	46.90	36.89	30.30
other causes	215.07	165.35	138.74	208.93	174.36	155.15
all causes of death	390.98	293.76	240.81	374.27	296.63	259.84

1) Age-standardized mortality rates by gender, calculated for the age groups 0–74 years using the direct method of standardization to the European standard population.

Source: NOLTE & McKEE (in preperation), Does health care save lives? Avoidable mortality revisited. London.

In 2000, the number of potential years of life lost in Austria – taking into consideration all causes of death – was 2,589 years for women under 70 years of age and 5,075 for men in the same age group (per 100,000 inhabitants), for both sexes less than half of what it was in 1970. Nevertheless, the figures for men are still nearly twice as high as those for women, although there has been a marked reduction in cardiovascular diseases for men.

Fig. 28: Potential years of life lost for the population aged under 70 years, all causes of death, Austria 1970–2000



Source: OECD Health Data 2002.

While cardiovascular diseases and cancer remain the most frequent causes of death and present the highest number of lost life years, the number of lost life years has been more than halved over the past two decades for both men and women for both causes of death. This is in part attributable to environmental and life style factors, and can also be seen as a parameter for the progress in medicine and the improvement of therapeutic measures over the last three decades.

Austria´s Position among European Countries

Compared with other European countries, the figures for Austria are relatively favourable, especially for women – roughly equal to Luxembourg and Switzerland. The lowest figures are those for Swedish, Spanish and Italian women, while Portuguese women had the highest number of lost life years.

For men, as well, Austria is near the average, positioned between Germany and Greece. Sweden has the most favorable values here as well, followed by the Netherlands and Switzerland, while Portugal has the highest rate by far.

Fig. 29: Potential years of life lost for the population aged under 70 years, Austria compared to other European countries 1998, by gender[1)]

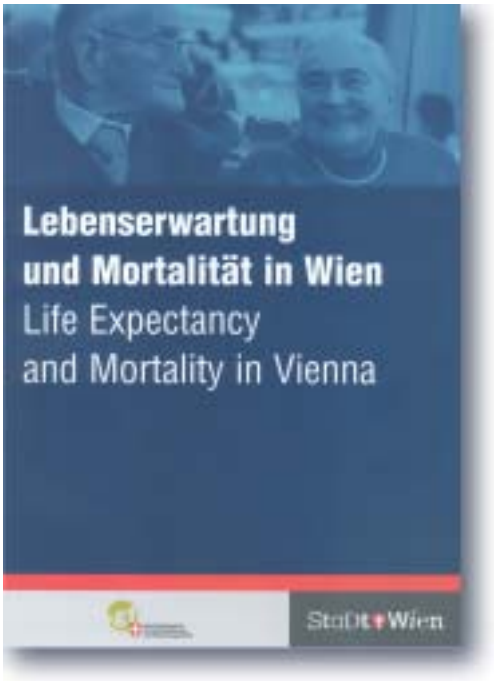


1) European Union without Belgium (no current data available) and including Switzerland. Due to incomplete availability of newer data, 1998 was selected as year of reference. Belgium is not included, as the most recent figures are for 1995 and therefore not comparable. Figures for Switzerland: 1997. Germany: Old and new Länder.

Source: OECD Health Data 2002.

Life Expectancy and Mortality in Vienna

The report on **Life Expectancy and Mortality in Vienna** (2003) which forms the basis for this brochure not only presents data on the current and expected demographic structure, but also has a strong focus on data and time series concerning the development of life expectancy and mortality in Vienna in particular, as well as a national and European comparison of the corresponding data. It also describes the change in the most frequent causes of death and the structural change in morbidity, especially among elderly people, over the last century.



254 pages, German. Includes an overall summary in English at the beginning of the report as well as summaries in English at the beginning of each chapter.

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Health in Vienna / Gesundheit in Wien

The brochure **Health in Vienna** (March 2003) gives an overview of the most important aspects of the public health care system of Vienna. The first part of the brochure, *"What we know",* includes facts and figures on the state of health and the health relevant behaviour of the Viennese population. Mission statements and programmatic approaches are presented in the chapter *"What we want"*, and the third part, *"What we do"*, describes relevant aspects of the Viennese public health care system – ranging from hospitals to health promotion.

32 pages, available in German and English.

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